

### **SE97 Telephone Follow-Up to Intercept Survey Instrument (Long Form): Justification**

The justification for each Question in the survey is provided below. For each Question the subset of respondents that will be asked the given question is indicated in the following manner. Questions asked of all respondents are denoted with the abbreviation AR. Other abbreviations are as follows: TR denotes question asked of respondents that have targeted the species of interest during the 2 month wave but not on the intercepted trip; NTR denotes questions asked to respondents that did not target the species of interest during the 2 month wave; OA denotes question asked of overnight respondents; BO denotes questions asked of respondents who own a boat; BF denotes questions asked of respondents who fished from a boat; EH denotes questions asked of individuals who are employed; UH denotes questions asked of individuals who are not employed.

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| Question 1  | AR - The information collected in Question 1 will be used to help evaluate persistence of angler behavior for use in estimating fishing values. Information on previous travel behavior to the intercepted site can provide insights into patterns of travel behavior. Individuals that have visited the same site on multiple occasions may have a higher likelihood of selecting that site than otherwise. This information will be incorporated in the behavioral model used to estimate saltwater fishing values.                              |
| Question 1a | AR - See Question 1  |
| Question 1b | AR - See Question 1  |
| Question 2  | AR - See Question 1  |
| Question 2a | AR - See Question 1  |
| Question 2b | AR - See Question 1  |
| Question 3  | OA - Information obtained from Question 3 will be used to estimate the propensity of overnight trips and to characterize overnight trip patterns.  |
| Question 4  | AR - The number of years a respondent has been saltwater recreational fishing will be used to characterize anglers. Years of experience may be treated as a measure of avidity and used in modeling the economic value of saltwater recreational fishing. Years of fishing experience may also be correlated with attitudes toward fishing and a variety of other characteristics such as boat ownership and investment in fishing equipment.  |
| Question 5  | AR – If years spent saltwater fishing can be used as a measure of general avidity, years spent saltwater fishing in the intercept state can be used as a measure of local avidity and experience. It is thought that this may influence attitudes towards local regulations as well as expected catch rates.   |
| Question 6  | AR - This Question elicits information on both persistence of behavior and species substitution, providing insights on how target activity changes or might be expected to change as the availability of specific species is impacted either through natural conditions or management.<br><b>SKIP JUSTIFICATION:</b> If angler does not target a particular species, skip to question 6b. 6a is skipped in this case because it is assumed that individuals do not have an expected catch rate when they do not have an identified target species. |

- Question 6a AR - Expectations of catch performance can be expected to influence site, mode and target behavior as well as influences values attached to proposed management changes.
- Question 6b AR - Motivations for non-target behavior provide insight into how behavior might be expected to respond to management and fishery changes as well as influence values attached to proposed management changes.
- Question 7 AR - Contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question asks if fishing frequency changes as a result of regulation changes, allowing the evaluation of changes in economic value and economic value of fishing as fishing policies are changed.  
**SKIP JUSTIFICATION:** If the respondent answers no to the above, the follow up questions, 7a & 7b are skipped because those questions do not apply to an individual that has not changed fishing behavior based on regulation changes.
- Question 7a AR – If angler behavior has been altered by regulation, the angler is asked the direction of behavior change. If the number of fishing trips taken increase (decrease) the utility derived from fishing is increased (decreased).
- Question 7b AR – Once the direction of change is established the enormity of change is quantified. Using direction of change and magnitude and tying that information to per trip travel cost, the economic value of change can be estimated.
- Question 8 AR – Again, contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question asks if fishing frequency changed as a result of changes in catch rates, allowing the evaluation of changes in economic value and societal welfare changes when fishing quality is increased (decreased).  
**SKIP JUSTIFICATION:** If the respondent answers no to the above, the follow up questions, 8a & 8b are skipped because those questions do not apply to an individual that has not changed fishing behavior based on catch rate changes.
- Question 8a AR – If angler behavior has been altered by regulation, the angler is asked the direction of behavior change. If the number of fishing trips taken increase (decrease) the utility derived from fishing is increased (decreased).
- Question 8b AR – Once the direction of change is established the enormity of change is quantified. Using direction of change and magnitude and tying that information to per trip travel cost, the economic value of change can be estimated.
- Question 9 AR – Again, contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these

stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question asks if target species changed as a result of changes in catch rates and/or fishing regulation changes, allowing the evaluation of changes in economic value and societal welfare changes when fishing quality is increased (decreased) or regulations are changed.

**SKIP JUSTIFICATION:** If the respondent answers no to the above, the follow up questions, 9a is skipped because those questions do not apply to an individual that has not changed target species because of catch rate changes or regulation changes.

- Question 9a AR –Identifies target species change.
- Question 10 AR - South Atlantic Only. This will be used to profile anglers and guide the future management of the particular species selected as the target. Anglers have different attitudes toward specific management methods and Question 10 will provide insights into the types of management approaches that may be more or less likely to be supported by recreational anglers.
- Question 11 AR - South Atlantic Only – Uses a different species and different regulation scenarios to derive attitudes towards future management options as discussed in Question 10.
- Question 11 AR - Gulf of Mexico Only – Solicits willingness to pay (WTP) for a permit that would allow the holder to maintain current catch limits in the face of limit reductions. Direct welfare values associated with a change in the bag limit for a selected species can be used to contrast the species specific indirect behavioral model approach used to estimate recreational fishing values associated with changes in catch rates (Question 8).  
**SKIP JUSTIFICATION:** If angler answer is greater than \$0, skip to Question 12. This allows exploration of the \$0 bid. It is thought that there may be several reasons distinctly different reasons for a \$0 bid and this skip directs those with \$0 bids to a follow-up question used to illicit the motivations behind the \$0 bid.
- Question 11a AR - Decisions not to place values on bag limit increases for the species of interest may be based on a variety of factors. The information collected in Question 11a will be used to characterize individuals not perceived to obtain any benefit from the illustrated bag limit enhancement scenarios. It will also be used to identify \$0 bids that may be better classified as protest against the particular policy. These types of bids must be rejected from the valuation models because those individuals may actually place a value on the species but instead they respond with a \$0 bid as a form of protest against the policy.
- Question 12 AR - Solicits willingness to pay (WTP) for a permit that would allow the holder to maintain current catch limits in the face of limit reductions. Direct welfare values associated with a change in the bag limit for a selected species can be used to contrast the species specific indirect behavioral model approach used to estimate recreational fishing values associated with changes in catch rates (Question 8).  
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- Question 13      AR – Gulf of Mexico Only - Contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question gives anglers 9 discreet response choice in the face of a 0 bag limit for red snapper.
- Question 13      AR – South Atlantic Only - Contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question gives anglers 9 discreet response choice in the face of a zero bag limit for gag.
- Question 14      AR – South Atlantic Only – Solicits willingness to pay (WTP) for a permit that would allow the holder to maintain current catch limits in the face of limit reductions. Direct welfare values associated with a change in the bag limit for a selected species can be used to contrast the species specific indirect behavioral model approach used to estimate recreational fishing values associated with changes in catch rates (Question 8).  
**SKIP JUSTIFICATION:** If angler answer is greater than \$0, skip to Question 15. This allows exploration of the \$0 bid. It is thought that there may be several reasons distinctly different reasons for a \$0 bid and this skip directs those with \$0 bids to a follow-up question used to illicit the motivations behind the \$0 bid.
- Question 14a      AR - Decisions not to place values on bag limit increases for the species of interest may be based on a variety of factors. The information collected in Question 11a will be used to characterize individuals not perceived to obtain any benefit from the illustrated bag limit enhancement scenarios. It will also be used to identify \$0 bids that may be better classified as protest against the particular policy. These types of bids must be rejected from the valuation models because those individuals may actually place a value on the species but instead they respond with a \$0 bid as a form of protest against the policy.
- Question 15      AR – Contingent behavior questions elicit information on how behavior changes - taking more or fewer trips, or targeting new species - in response to certain conditions. This information allows us to project future actions based on real events and behavioral changes. When combined with site specific travel costs and information concerning fishing mode and targeted species, welfare change estimates can be calculated from these stated behavior patterns. Using a similar methodology, the economic value of the fishing sites or groups of sites can be calculated. This particular question gives anglers 9 discreet response choice in the face of a zero bag limit for king mackerel.
- Question 16      BR - In Question 16 the amount of monetary costs associated with boat related fees, such as, rental fees, boat launching fees and party/charter fees are elicited for use in the development of behavioral models to estimate saltwater recreation values. Included as a component of travel cost.
- Question 17      AR - Boat ownership may influence attitudes toward fishing and may affect the type of trip, species targeting behavior, and fishing site selection. Boat ownership will be incorporated into the economic valuation model.

**SKIP JUSTIFICATION:** If respondent does not own a boat, additional boat information is unnecessary. In this case Questions 17a and 17b are skipped.

- Question 17a BO - Boat storage may influence choice of fishing areas and thus species targeting behavior. Boat storage will be incorporated into the economic valuation model.
- Question 17b BO - The length of the boat used for fishing will be used to provide descriptive information about the regional recreational fishing fleets. Additionally, boat characteristics such as length may influence species targeting behavior and site selection.
- Question 17c AR - This information will be used to profile anglers as well as provide insight to how attitudes towards enforcement may influence fishing behavior.
- Question 17d AR – This question will be used to indicate regional enforcement pressure. This will lend insight regarding how actual regional enforcement may influence behavior.
- Question 18 AR - Age of the respondent will be used to develop a profile of participation behavior in the Regions.
- Question 18a AR - This Question allows us to age respondents that did not answer Question 20 - See Question 20.
- Question 26 AR - Gender will be used to develop a profile of participation behavior. Past studies have shown gender to be related to the likelihood that a respondent fishes, with women being less likely to participate.
- Question 19 AR - Race will be used to develop angler profiles for the Regions. Social and demographic factors may also be used in developing the behavioral model to estimate saltwater recreational fishing values.
- Question 20 AR – Further develops ethnic background with respect to Hispanic heritage.  
**SKIP JUSTIFICATION:** If angler is not Hispanic, 23a was skipped.
- Question 20a AR – Further develops Hispanic origin for more detailed angler profiling.
- Question 21 AR - Employment status will be used to develop angler profiles. Past research using the travel cost method and its variants have stressed the importance of assigning a value to the individual's opportunity cost of time. The opportunity cost of time may be thought of as being affected by whether the individual is employed, the nature of the employment, whether any income was actually foregone in order to take the trip, and the value of the foregone income. All of these factors will be evaluated and used in the economic valuation model to compute an appropriate value of time.  
**SKIP JUSTIFICATION:** If angler is unemployed, employment type is not needed and Question 24a is skipped. If angler is employed, unemployment type is not needed and Question 24b is skipped.
- Question 21a EH – Whether respondent is employed full or part time has bearing on the availability for fishing time and consequently the opportunity cost of the angler's time..
- Question 21b UH –Unemployment types also have explanatory power in the opportunity cost equation. A retired individual's time has a different opportunity cost than the opportunity cost of time that a student has.  
**SKIP JUSTIFICATION:** Because the unemployed do not earn wages from job, wage and salary information is unnecessary. As a result, Questions 25, 26 and 27 are skipped
- Question 22 EH –Weekly hours worked is a component of opportunity cost of time.

- Question 23 EH – Foregone income is an important component of the opportunity cost of the angler’s time, and the angler was asked whether or not income was foregone.  
**SKIP JUSTIFICATION:** If no income was foregone, i.e. paid vacation, weekend, etc, then 26a was skipped.
- Question 23a EH – Again, the exact amount of income foregone is an important component of opportunity cost of time.
- Question 24 EH – Hourly wages are easily translated in hourly opportunity cost of time, but salaries must be converted to hourly figures. Anglers were then asked whether they work for hourly wages or salaries.  
**SKIP JUSTIFICATION:** If the angler earns wages, Question 27w was asked and if the angler earned a salary, 27s was asked.
- Question 24w EH – Specific hourly wage is an important component of opportunity cost of time.
- Question 24s EH – Specific, personal, annual salary is an important component of opportunity cost of time.
- Question 25 AR - Total annual household income will be used to develop angler profiles for the Regions. Also, income is an explanatory variable used in the estimation of economic valuation models. Thus, income will be used in estimation of saltwater recreational fishing values in each Region.

#### **Telephone Follow-Up to Intercept Survey Instrument (Short Form)**

The short form was administered to those anglers that had been intercepted more than once and had already completed a long form telephone follow-up survey. This short form contained only questions about demographics that may have changed since the last interview and all valuation questions were dropped, in order not to double count there preferences and values. Because this version is only a short version of the long form, the questions will not be re-justified. Instead the question numbers of the questions used from the long form will be listed and their justification can be read in the document above.

<b><u>Short Form</u></b>	<b><u>Long Form</u></b>
Question 1	Question 1
Question 1a	Question 1a
Question 1b	Question 1b
Question 2	Question 2
Question 2a	Question 2a
Question 2b	Question 2b
Question 3	Question 3
Question 4	Question 16
Question 4r	Question 16r
Question 4c	Question 16c
Question 5	Question 17
Question 5a	Question 17a
Question 5b	Question 17b
Question 6	Question 17c
Question 7	Question 17d

- Question 8 New question. If employment status has changed since last interview, all employment information is gathered again.  
**SKIP JUSTIFICATION:** If there have been no changes skip Questions 9, 9a, 9b, 12, 12w, 12s, and 13. This information is not necessary if there have been no changes to employment status.

Question 9	Question 21
Question 9a	Question 21a
Question 9b	Question 21b
Question 10	Question 22
Question 11	Question 23
Question 11a	Question 23a
Question 12	Question 24
Question 12w	Question 24w
Question 12s	Question 24s
Question 13	Question 25